Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BOBBY W. SANDERS, JOSEPH L. KONCSEK
and LINDA S. HEDGES

Appeal No. 2003-0239
Application 09/382,437

ON BRIEF

Before FRANKFORT, STAAB, and NASE, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 and 9 through 12. Claims 2 through 8, the only other claims remaining in the application, have been withdrawn from further consideration as being directed to non-elected species. Claims 13 through 19 have been canceled.

Appellants' invention relates to a supersonic inlet and, more particularly, to an external-compression supersonic inlet for an air-breathing propulsion system. Independent claim 1 is representative of the subject matter on appeal and a copy of that claim can be found in the Appendix to appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Lennard	3,430,640	Mar. 4, 1969
Ferguson et al. (Ferguson)	4,378,097	Mar. 29, 1983

Claims 1 and 9 through 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lennard in view of Ferguson.

Rather than reiterate the examiner's full commentary regarding the above-noted rejection and the conflicting viewpoints advanced by appellants and the examiner regarding the rejection, we make reference to the final rejection (Paper No. 10, mailed October 10, 2001) and the examiner's answer (Paper No. 16, mailed June 4, 2002) for the reasoning in support of the

rejection, and to appellants' brief (Paper No. 15, filed March 25, 2002) and reply brief (Paper No. 17, filed July 17, 2002) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we have made the determination that the examiner's rejection of claims 1 and 9 through 12 will not be sustained. Our reasons follow.

In rejecting claims 1 and 9 through 12 under 35 U.S.C. § 103(a), the examiner has urged that "Lennard discloses an external-compression supersonic inlet" (final rejection, page 2) having a configuration like that set forth in appellants' claims on appeal, except that Lennard is silent with regard to the main wall (20) of the supersonic inlet therein being generally circumferential. To account for this difference, the examiner turns to Ferguson, finding that this patent "teaches that a wall

62 that is circumferential is well known in the art to reduce radar return," and concluding that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention "to have curved the main wall of Lennard as taught by Ferguson et al to reduce radar return to form a more stealthy system" (final rejection, page 3).

Having reviewed and evaluated the applied patents to Lennard and Ferguson, we share appellants' assessments of the examiner's § 103 rejection as set forth in the brief and rely brief. Like appellants, we note that claim 1 on appeal is directed to an "external-compression supersonic inlet" and that appellants' specification at page 2 makes clear that such a supersonic inlet accomplishes "all supersonic compression externally such that the flow in the inlet duct is all subsonic" (emphasis added). By contrast, the supersonic inlet of Lennard is specifically described as being a variable geometry, external-internal compression inlet (col. 3, lines 10-19, and col. 4, lines 42-45), wherein part of the supersonic compression is accomplished forward of the inlet duct aperture and supersonic compression continues internally in the forward part of the duct, followed by subsonic compression.

In light of appellants' disclosure on page 2 of the specification concerning the three types of supersonic inlets and that of Lennard at column 2, lines 30-47, addressing the same three types of inlets, it is clear to us that those skilled in the art would recognize the external-internal compression supersonic inlet of Lennard and the external-compression supersonic inlet claimed by appellants as being distinctly different types of supersonic inlets with distinctly different characteristics and designs.

In the face of this recognition in the art, the examiner's position on page 4 of the answer that

> Lennard's system clearly discloses that his system is an external-compression supersonic inlet. Even if Lennard's desired embodiment is a "mixed" system, it still is an "external-compression" inlet. This meets the limitations of the claims

is totally without foundation. As is the examiner's further assertion on page 4 of the answer that "[t]he inlet would still have functioned as an external-compression inlet with the combination of Lennard and Ferguson."

Like appellants, we also recognize that Ferguson does not appear to relate to a supersonic inlet at all, but is apparently directed to an inlet design for subsonic operation of turbojet engines. Thus, it is questionable whether one of ordinary skill in the art would even consider modifying the supersonic external-internal compression inlet of Lennard based on teachings of the subsonic inlet of Ferguson. Moreover, even if such a modification as urged by the examiner were to be undertaken, there is absolutely no basis to conclude that an "external-compression supersonic inlet" like that claimed by appellants would be the result.

As a further point, we also share appellants' views as expressed in the brief at page 8 and in the reply brief at page 4, regarding the requirement in claim 1 on appeal for the main wall to have an inner surface formed generally "as a circumferentially extending portion of a surface of revolution." No such main wall inner surface configuration is taught or suggested in either Lennard or Ferguson.

In light of the foregoing, it is our determination that the examiner has failed to establish a *prima facie* case of obviousness, and for that reason we will not sustain the examiner's rejection of claims 1 and 9 through 12 under 35 U.S.C. § 103(a).

The decision of the examiner to reject claims 1 and 9 through 12 of the present application under 35 U.S.C. § 103(a), accordingly, is reversed.

REVERSED

CHARLES E. FRANKFORT Administrative Patent Judge	)	
LAWRENCE J. STAAB Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JEFFREY V. NASE Administrative Patent Judge	)	

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